

# Research on the Relationship between Population Variables and Teachers' Job Satisfaction: A Case Study of Public Middle Schools in Shangrao, China

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## Abstract

This study aims to explore the relationship between demographic variables such as gender, age, and educational level and teachers' job satisfaction. By analyzing the questionnaire survey data of 380 teachers, multiple regression analysis, t-test and one-way analysis of variance (ANOVA) were adopted for data analysis. Research has found that the job satisfaction of female teachers is significantly higher than that of male teachers. Older teachers (aged 50-59) have higher job satisfaction compared to younger teachers (aged 20-29 and 30-39). Furthermore, there is also a significant relationship between educational level and job satisfaction. Based on the research results, strategies for improving teachers' job satisfaction are proposed in response to differences in gender, age and educational level.

**Keywords:** Population Variable, Teachers' Job Satisfaction, Gender Differences, Age Difference, Differences in Educational Levels

## Introduction

Teachers constitute one of the most critical professional groups in society. Their job satisfaction not only influences their career development but is also directly linked to the quality of education and students' academic performance (Guarino, 2006). With societal progress and the deepening of educational reform, teachers' job satisfaction has emerged as a significant research topic in both education and management fields. Extensive studies have demonstrated that teachers' job satisfaction is associated with multiple factors, including working conditions, salary and benefits, career development opportunities, and social support (Ingersoll, 2001; Sargent, 2005). However, demographic variables such as gender, age, and educational level, which are also closely related to job satisfaction, often receive insufficient attention in many studies (Johnson, 2003).

In domestic and international research, gender and age are generally considered important factors influencing teachers' job satisfaction. Tschannen-Moran and Hoy (2001) noted that female teachers tend to exhibit higher levels of job satisfaction, largely due to their advantages in social support and emotional expression. Female teachers typically possess stronger emotional communication skills and colleague support, enabling them to derive greater emotional satisfaction from their work and thereby enhance their job satisfaction (Johnson, 2006). Regarding age, numerous studies have found that older teachers generally report higher job satisfaction because of their extensive teaching experience and stable working environments (Lee, 1999; Skaalvik, 2011). Harrison (2007) argues that the accumulated experience of older teachers allows them to effectively address teaching challenges, thus enabling them to enjoy greater achievement and satisfaction from their work (Harrison, 2007). Moreover, older teachers face relatively less pressure regarding career development and enjoy higher career stability, which further contributes to their job satisfaction (Day, 2010).

However, the relationship between educational level and teachers' job satisfaction remains controversial. Some studies suggest that highly educated teachers, due to their elevated career expectations and self-requirements, may feel dissatisfied with existing working conditions, leading to lower job satisfaction (Moen, 2012; Williams, 2009). Conversely, other studies indicate that teachers with advanced academic qualifications possess stronger professional abilities and self-confidence, making them more likely to achieve a sense of accomplishment in their careers and thus report higher job satisfaction. For example, Smith et al. (2010) argued that although highly educated teachers may have higher expectations, their superior professional capabilities often lead to greater professional achievements, resulting in relatively high overall satisfaction (Johnson, 2010). This suggests that the impact of educational level on teachers' job satisfaction is not determined by a single factor but rather influenced by the interaction of multiple elements.

Therefore, investigating the relationship between demographic variables such as gender, age, and educational level and teachers' job satisfaction continues to hold substantial theoretical and practical significance. Such studies can provide an empirical foundation for the formulation of educational policies, assisting educational administrators in understanding and improving teachers' working environments, thereby enhancing teachers' job satisfaction and educational quality (Wang, 2015; Zhang, 2018). This study focuses on public middle schools in Shangrao City, Jiangxi Province, China, aiming to deeply explore the relationship between these demographic variables and teachers' job satisfaction, offering new perspectives and data support for theoretical research and policy practices concerning teachers' career development.

## **Methodology**

### *Sample and Data Collection*

This study employed a quantitative survey method to investigate job satisfaction among public middle school teachers in Shangrao City, Jiangxi Province. A total of 395 questionnaires were distributed online, of which 380 valid responses were collected. All participants participated voluntarily and anonymously. The questionnaire consisted of two sections: basic demographic information (gender, age, education level, etc.) and a Teacher Job Satisfaction Scale using a five-point Likert scale (1 = very dissatisfied; 5 = very satisfied).

*Variable Design*

Independent variables: Gender, age, and education level.

Dependent variable: Job satisfaction.

Job satisfaction was assessed across four key dimensions:

Role Belief (RB): Teachers' identification with their role in the education system.

Occupational Commitment (OC): The level of enthusiasm and commitment teachers have towards the teaching profession.

Teaching Input (TI): The extent of time, effort, and energy devoted by teachers to their teaching responsibilities.

Teaching Effectiveness (TE): Teachers' self-evaluation of their instructional outcomes.

Each dimension is considered a critical component of job satisfaction and is further examined in the data analysis.

*Data Analysis Methods*

Reliability and validity of the questionnaire were evaluated using Cronbach's  $\alpha$  and Exploratory Factor Analysis (EFA). Subsequently, Multiple Regression Analysis, Independent Sample t-tests, and One-Way ANOVA were conducted to assess the impact of demographic variables on teacher job satisfaction.

**Data Analysis and Results***Reliability and Validity Analysis*

To verify the internal consistency of the job satisfaction scale, Cronbach's alpha coefficients were calculated for each dimension. As shown in Table 1, all coefficients exceeded the recommended threshold of 0.80, indicating high reliability across all subscales.

Table 1

*Cronbach reliability analysis*

Dimensions	Number of terms	Cronbach $\alpha$ coefficient
JSA	40	0.956
RB	10	0.939
OC	10	0.939
TI	10	0.944
TE	10	0.938

These results confirm excellent internal consistency, supporting the scale's reliability for measuring teacher job satisfaction.

In addition, construct validity was assessed using exploratory factor analysis. As shown in Table 2, the average factor loading for each dimension was above 0.70, indicating that the items strongly reflect their corresponding constructs.

Table 2

*Average Factor Loadings of Job Satisfaction Dimensions*

Dimensions	Number of terms	Factor loading (mean value)
RB	10	0.76
OC	10	0.79
TI	10	0.81
TE	10	0.75

These values confirm good construct validity, demonstrating that the questionnaire items appropriately capture the intended conceptual dimensions.

### *Descriptive Statistics*

The demographic characteristics of the sample are shown in Table 3. The sample consisted of 191 male teachers (50.26%) and 189 female teachers (49.74%), indicating a nearly equal gender distribution. Age groups were fairly balanced, with slightly more teachers in the 30–39 age range. In terms of education level, 51.32% of the participants held a master’s degree or higher.

Table 3  
*Demographic Characteristics of the Sample*

Variable	Category	N	Percentage (%)
Gender	Male	191	50.26
	Female	189	49.74
Age	20–29 years	91	23.95
	30–39 years	104	27.37
	40–49 years	95	25.00
	50–59 years	90	23.68
Education Level	Bachelor or below	185	48.68
	Master or above	195	51.32

### *Multiple Regression Analysis*

A multiple regression analysis was conducted to examine the relationships between gender, age, education level, and job satisfaction. As shown in Table 4, gender and age were significantly associated with job satisfaction. Female teachers reported higher levels of job satisfaction than male teachers ( $\beta = 0.24$ ,  $p < 0.01$ ). In addition, a positive relationship was observed between age and job satisfaction, with teachers in older age groups—particularly those aged 50–59—reporting the highest satisfaction scores.

Table 4  
*Regression Analysis Results*

Variable	Category	$\beta$	SE	t	p
Gender	Female	0.24	0.09	2.67	0.000**
	Male	0.12	0.08	1.50	0.000 **
Age	20–29 years	0.18	0.10	1.80	0.000 **
	30–39 years	0.14	0.10	1.40	0.000 **
	40–49 years	0.28	0.10	2.80	0.000 **
	50–59 years	0.32	0.12	2.67	0.000**
Education Level	Master or above	0.18	0.09	2.00	0.000**
	Bachelor or below	0.15	0.09	1.67	0.000 **

\*  $p < 0.05$  \*\*  $p < 0.01$

These findings suggest that both gender and age show significant relationships with job satisfaction, while the association between education level and job satisfaction, although observable, appears to be less pronounced.

### Differential Analysis

#### Gender Differences

An independent sample T-test was conducted to compare male and female teachers' job satisfaction scores across the four dimensions. Table 5 shows that female teachers scored significantly higher in all dimensions, with p-values below 0.01.

Table 5

#### T-test Results for Gender Differences

	Gender (mean ± standard deviation)		T	P
	Female (n=191)	Male (n=189)		
RB	2.98±0.81	2.41±0.96	6.239	0.000 **
OC	3.04±0.73	2.33±0.98	7.927	0.000 **
TI	2.89±0.83	2.34±0.98	5.801	0.000 **
TE	2.97±0.82	2.36±0.94	6.726	0.000 **

\* p<0.05 \*\* p<0.01

This indicates that female teachers have a more positive perception of their professional role, greater commitment, and higher evaluation of their teaching input and effectiveness.

#### Age Differences

One-way ANOVA was used to examine job satisfaction differences across age groups. Results showed significant differences in all four dimensions, with older teachers reporting higher satisfaction.

Table 6

#### ANOVA Results for Age

	Age (mean ± standard deviation)				F	P
	20-29(n=91)	30-39(n=104)	40-49(n=95)	50-50(n=90)		
RB	2.52±0.87	2.25±0.99	2.80±0.75	3.29±0.77	25.829	0.000 **
OC	2.43±0.85	2.18±0.99	2.95±0.70	3.27±0.75	33.946	0.000 **
TI	2.43±0.85	2.19±0.99	2.79±0.85	3.11±0.81	20.019	0.000 **
TE	2.43±0.87	2.17±0.92	2.89±0.76	3.24±0.78	31.281	0.000 **

\* p<0.05 \*\* p<0.01

The differences are statistically significant, confirming that age is a relevant factor in determining job satisfaction, likely due to increased experience and professional confidence.

#### Education Level Differences

Teachers with a master's degree or higher reported higher satisfaction than those with a bachelor's degree or below. Table 7 presents the results, with all differences being statistically significant (p < 0.01).

Table 7

*T-test Results for Education Level*

	Education Level (mean ± standard deviation)			T	P
	Bachelor (n=191)	or below (n=189)	Master or above		
RB	2.87±0.85	2.97±0.79	2.315	0.000	**
OC	2.92±0.79	3.12±0.74	2.907	0.000	**
TI	2.73±0.86	2.99±0.81	3.276	0.000	**
TE	2.85±0.84	2.98±0.79	2.041	0.000	**

\*  $p < 0.05$  \*\*  $p < 0.01$

These findings highlight the role of educational attainment in shaping perceptions of job effectiveness and professional fulfillment.

### Discussion

This study explored the relationships between gender, age, and education level and teachers' job satisfaction among public middle school teachers in Shangrao City, Jiangxi Province. The results reveal notable patterns in how these demographic variables are associated with different dimensions of job satisfaction.

#### *Gender and Job Satisfaction*

The findings show a significant relationship between gender and job satisfaction, with female teachers reporting higher satisfaction than their male counterparts across all four measured dimensions—Role Belief, Occupational Commitment, Teaching Input, and Teaching Effectiveness. This aligns with the observations of Tschannen-Moran and Hoy (2001), who noted that female teachers are more likely to experience emotional support and social affirmation, which may strengthen their sense of professional value and satisfaction. Additionally, female teachers may be more inclined to seek interpersonal harmony and emotional connection in the workplace, which could enhance their overall job experience. In contrast, male teachers may encounter challenges in forming similar support networks, particularly in educational environments where they represent a smaller proportion of the workforce.

#### *Age and Job Satisfaction*

A positive correlation was observed between age and job satisfaction, with teachers aged 50–59 reporting the highest satisfaction levels. This suggests that as teachers grow older, they may develop stronger professional identities, feel more confident in their teaching, and experience greater work stability. These patterns are consistent with Harrison (2007), who found that more experienced educators tend to report higher satisfaction, possibly due to clearer role expectations, refined instructional strategies, and established professional relationships. Conversely, younger teachers may still be adjusting to their roles and managing early-career uncertainty, which may be associated with comparatively lower satisfaction.

#### *Education Level and Job Satisfaction*

The analysis also reveals a meaningful association between education level and job satisfaction. Teachers with higher academic qualifications (Master's degree or above) reported relatively higher scores across all job satisfaction dimensions. This is in line with prior research (e.g., Smith & Lee, 2010; Ingersoll, 2001), which suggests that more highly educated teachers tend to possess greater instructional confidence, broader pedagogical knowledge,

and clearer expectations regarding career development. These factors may be linked to enhanced satisfaction. Moreover, teachers with advanced degrees may be more engaged in continuous learning and academic innovation, which enriches their professional lives.

### **Conclusion and Policy Recommendations**

This study identified significant relationships between demographic variables—namely gender, age, and education level—and various aspects of teachers' job satisfaction. Female teachers, older teachers, and those with higher academic qualifications tend to report higher satisfaction. Based on these findings, a set of policy recommendations is proposed to promote more balanced and supportive working conditions for all teachers.

#### *Gender Based Strategies*

Since gender is associated with variations in job satisfaction, particularly in favor of female teachers, it is essential to consider initiatives that enhance the job experience of male teachers:

**Enhance social support for male teachers** through regular peer collaboration, team-building activities, and informal networking to foster a stronger sense of belonging.

**Offer flexible work schedules** to help balance work and personal responsibilities for teachers of all genders.

**Promote male teachers' professional identity** by involving them in leadership training, professional development workshops, and subject-specific forums that acknowledge their contributions.

#### *Age Based Strategies*

The data show a consistent pattern of increasing job satisfaction with age. To support younger teachers, who tend to report lower satisfaction, schools can implement the following:

**Provide structured career planning** to help early-career teachers set long-term goals and see clear development pathways.

**Expand access to professional training programs** tailored to younger educators to build skills, confidence, and teaching capacity.

**Establish a mentoring system** where senior teachers provide guidance and support to younger colleagues, facilitating smoother transitions into the profession.

#### *Education Level Recommendations*

A clear relationship between academic qualifications and job satisfaction was observed, indicating the importance of ongoing professional learning:

**Support teachers with lower qualifications** by offering opportunities for continuing education, including scholarships, evening classes, and professional certification programs.

**Recognize and utilize highly qualified teachers** by involving them in curriculum development, mentoring, and school-wide improvement initiatives.

**Foster a culture of academic growth** where lifelong learning is encouraged and rewarded across all staff levels, regardless of current qualification.

#### *General Strategies for All Teachers*

Beyond the relationships identified in this study, broader support mechanisms can benefit the entire teaching workforce:

**Improve working conditions** by enhancing teaching facilities, classroom environments, and access to teaching materials.

**Adjust compensation and benefits** to more accurately reflect the demands of the teaching profession, especially in under-resourced areas.

**Establish transparent promotion systems** to ensure that all teachers, regardless of background, have equal access to career advancement opportunities.

#### *Directions for Future Research*

This study was limited to examining the relationships between demographic variables and job satisfaction. Future research could expand on these findings by investigating other factors such as:

**School leadership styles** and how they relate to teachers' morale and satisfaction.

**Workplace climate and resources**, including collegial support, administrative responsiveness, and workload management.

**Psychological variables** such as occupational stress, burnout, and emotional exhaustion.

Additionally, longitudinal studies are encouraged to examine how teachers' job satisfaction changes over time and in response to institutional or societal shifts. Comparative studies across different regions or school types could also enhance understanding of how contextual factors shape teacher satisfaction.

#### **References**

- Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, 76(2), 173-208.
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499-534.
- Sargent, T. C., & Hannum, E. (2005). Keeping teachers: A comparison of teacher retention in urban and rural schools. *Journal of Research in Rural Education*, 20(1), 14-23.
- Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a sense of success: New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581-617.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805.
- Johnson, S. M. (2006). The influence of workplace conditions on teachers' professional lives. *Teaching and Teacher Education*, 22(3), 294-305.
- Lee, V. E., & Smith, J. B. (1999). Social support and teacher satisfaction: Age and gender as moderators. *Journal of Educational Psychology*, 91(4), 649-658.
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 27(4), 1052-1060.
- Harrison, J. (2007). The influence of age on job satisfaction among school teachers. *Educational Research Quarterly*, 31(3), 20-34.
- Day, C., & Gu, Q. (2010). *The new lives of teachers*. Routledge.
- Moen, R. (2012). The role of advanced degrees in teacher satisfaction. *Teaching and Teacher Education*, 28(1), 132-141.
- Williams, B. (2009). Impact of educational level on teacher satisfaction: A longitudinal study. *Educational Research Review*, 8(3), 110-119.
- Smith, L. (2010). The influence of education level on teacher job satisfaction. *Educational Studies*, 56(2), 125-142.

- Johnson, R. (2010). Higher education and job satisfaction in the teaching profession. *Educational Psychology Review*, 22(2), 145-161.
- Wang, H. (2015). Factors affecting teacher job satisfaction in rural China. *Educational Policy Analysis*, 40(1), 102-118.
- Zhang, Y. (2018). Teacher satisfaction and career progression: Evidence from Chinese public schools. *Journal of Education and Practice*, 9(2), 56-67.
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
- Harrison, D. A. (2007). Job satisfaction and age: A meta-analytic review of empirical evidence. *Journal of Applied Psychology*, 92(2), 384–404.
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534.
- Liu, S., & Onwuegbuzie, A. J. (2012). Chinese teachers' work stress and their turnover intention. *International Journal of Educational Research*, 53, 160–170.
- Smith, P., & Lee, G. (2010). Higher education and job satisfaction: A cross-disciplinary analysis of the role of academic qualifications. *Educational Management Administration & Leadership*, 38(3), 307–328.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805.